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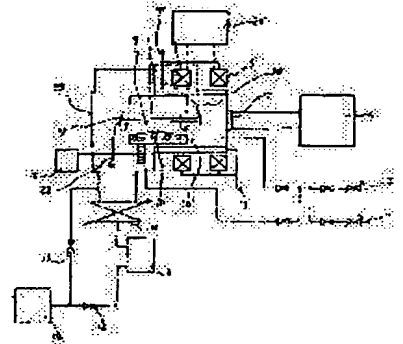
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(54) PLASTIC COATED WITH CARBON FILM

(57)Abstract:

PURPOSE: To form a carbon coat contg. diamond in part with good reproducibility by utilizing the high-density plasma using hybrid resonance at the time of forming the carbon coat on the surface of a plastic product.

CONSTITUTION: Decorative bodies 10 such as plastic gear, button, sphere, or spectacles frame are put in a cylindrical column 10', and the column is placed in a plasma producing space 1. The column 10' is rotated 17 by a rotating means 16, the inside of the space 1 is simultaneously evacuated, and then an inert gas such as Ar is introduced from a gas system 6. A microwave is supplied by a microwave oscillator 4 from an inlet 15 to produce high-density plasma, and the plastic products 10 in the column 10' are cleaned. A gaseous hydrocarbon such as C₂H₂ is successively introduced from a gas system 7, and excited by the high-energy density plasma of hybrid resonance to generate a carbon atom. Consequently, the film of diamond or i-carbon is formed on the surface of the plastic product 10.



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